



**State of New Hampshire
DEPARTMENT OF ENVIRONMENTAL SERVICES**

6 Hazen Drive, P.O. Box 95, Concord, NH 03302-0095
(603) 271-3406 FAX (603) 271-7894



March 11, 2003
Letter of Deficiency
DSP #03-028

Mr. Robert Griggs
WRG LLC
P.O. Box 1019
Epsom, NH 03234

RE: Huckins Mill Dam #079.10, Epsom

Dear Mr. Griggs

The Department of Environmental Services, Dam Bureau (DES) consistently strives to enhance the safety of dams in New Hampshire through its dam safety program. One of the many instruments that play a part in reaching this goal is our inspection program. DES is forwarding this correspondence to you to advise you that in accordance with RSA 482:12 and Env-Wr 502.02, an inspection of the subject dam was conducted on October 1, 2002. During this visual inspection and/or file review, the following deficiencies were observed:

The condition of the low level pipe and stoplogs is unknown. Although it is unlikely that the penstock will need to be opened for emergency operations, its operability is crucial in lowering the impoundment during low flow conditions. Looking downstream under the building along the penstock it is unclear how the transition from the riveted steel pipe to the CMP pipe is configured. In addition, water appeared to be leaking from the pipe (possibly undermining building footings) and there was sediment deposited at the outfall to the pipe indicating possible piping of soil into the penstock;

2. There is cracked concrete located on the left side of the trash rack on the upstream face of the dam;
3. The contact of the spillway and right training wall is showing signs of deterioration;
4. There is a crack at the change of alignment in the left core wall located to the left of the spillway;
5. There is no fill on either the upstream and downstream sides of the left concrete core wall. There are no design or as-built plans on file indicating if fill is required in this area;
6. There are trees and brush at the left abutment and along the length of the left core wall;
7. There is re-bar visible on the downstream toe of the left spillway training wall;
8. The downstream face of the spillway is in generally poor condition with several horizontal cracks (possibly cold joints from construction) as well as efflorescence visible along the length of the spillway;
9. The condition of the upstream face is unknown;

10. There is no operation and maintenance plan (O&M) on file with the DES;

The Emergency Action Plan (EAP) has not been tested or updated;

12. The dam does not have adequate discharge capacity to pass the design event with 1 foot of freeboard; and
13. There are no design, as-built, or stability calculations on file with DES.

DES believes that the above deficiencies can be corrected by performing the following items by the indicated schedule:

May 1, 2003:

1. Prepare and submit to the DES a written O&M. The plan should describe the control of impoundment levels, monitoring and maintenance procedures, and identify emergency contact personnel;
2. Update and test the EAP. Contact the DES EAP coordinator, Bethann McCarthy for assistance;
3. Identify a New Hampshire Licensed Professional Engineer who will conduct an inspection of the low level outlet pipe and address the lack of spillway discharge capacity by the dates indicated below;
4. Remove all trees and brush for a distance of 15 feet from the left spillway abutment and along the entire length of the left core wall;

November 1, 2003:

5. Repair the cracked concrete on the left side of the trash rack;
6. Under the direction of a New Hampshire licensed professional engineer, conduct an inspection of the penstock and repair as directed. DES should be contact prior to this inspection and invited to attend;
7. Schedule with DES a dewatered inspection of the dam. The purpose of the inspection will be to observe and document the condition of the upstream face of the dam;
8. Repair the crack on the left core wall at the change in alignment;
9. Submit plans and specifications to increase the spillway discharge capacity;
10. Conduct stability analysis of the spillway and left core wall; and
11. Prepare and submit as-built plans of the dam and appurtenant works.

Letter of Deficiency
Dam #079.10/DSP #03-028
March 11, 2003
pg. 3

Due to the time that has lapsed as well as additional deficiencies observed as a result of the October 1, 2002 inspection, DES will be officially closing out the 1999 LOD. Enclosed is a copy for your reference. It is our hope that the additional deficiencies as well as the outstanding deficiencies will be addressed within the schedule indicated above. Your dam is classified as a significant hazard "B" dam. DES cannot impress enough the importance of addressing all of the deficiencies.

DES is requesting that you complete and submit the attached "Intent to Complete Repairs" form, within 30 days of receipt of this letter, that will provide for correction of the identified deficiencies by the date(s) indicated above. Please call or write to our office if the repairs are completed ahead of the aforementioned schedule so that DES may schedule a follow-up inspection. Unless notified otherwise, DES will conduct the follow-up inspection on or after the date(s) indicated above. If you believe changes to the items of work or dates are necessary, please make the changes directly on the form and provide a brief explanation. Please call or write to our office if the repairs are completed before the aforementioned schedule. We have enclosed a self addressed stamped envelope for you to return this form.

Our intent in sending you this correspondence is to make you aware of items that DES believes warrant your attention to insure the continued safe operation of your dam. It is our hope that, through the submittal of the attached form and a commitment to keeping a well-maintained dam, you will voluntarily comply with the requested items of work. If we do not receive the intent form or a similarly adequate written reply, we will assume that you are in agreement with our findings and recommendations and DES will carry out follow-up inspections accordingly.

If you have any questions or comments regarding this Letter of Deficiency or would like to be present at future inspections, please contact me at 271-3406, or write to the Water Division at the address listed on the top of the previous page.

Sincerely,

 **COPY**

Jeffrey M. Blaney
Dam Safety Engineer

Attachments Guideline for an O&M plan, Copy of 1999 LOD, DB8, DB13

cc: Gretchen Rule ✓

Town of Epsom

Bethann McCarthy, P.E., EAP Coordinator ✓

Certified # 7000 1670 0000 0586 1742

JMB/was/h:/safety/wendy/lod/079-10lod.doc